

POP

Goes the Science!



Simple, low-cost, and endlessly fascinating, bubbles are the perfect way to build scientific thinking at home or in the classroom.

WHY BUBBLES?

Bubbles bring big science concepts like surface tension, geometry, and light refraction to life in a way children can actually see and touch. Children can't help but ask 'why?' when a bubble pops, shimmers with color, or holds its perfect round shape. All you need are a few simple ingredients to get started.

BUBBLE WORDS TO KNOW:

Surface Tension

The invisible "skin" that holds a bubble together.

Elasticity

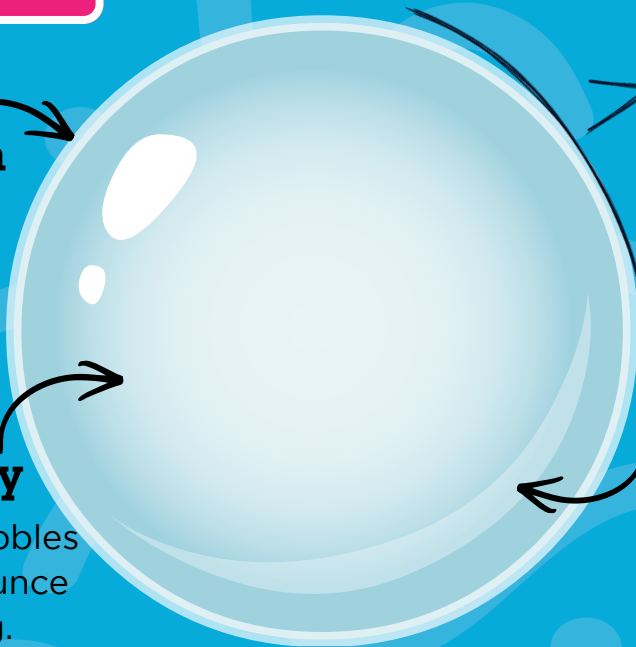
What helps bubbles stretch and bounce before popping.

Sphere

The round shape bubbles naturally form.

Refraction

The reason bubbles shimmer with rainbow colors.



THE BASIC BUBBLE RECIPE

Mix together:

- 6 cups water,
- 1 cup dish soap,
- 1 tablespoon glycerin,
- 1 teaspoon sugar (optional, strengthens bubbles).

Let it rest for 30 minutes before using.



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BE A BUBBLE INVESTIGATOR

Science is all about curiosity, and children are naturally full of it! Before each investigation, ask "What do you think will happen?" and when you're done, ask "What did you notice?" There are no wrong answers, just great questions!

The Shape Challenge:

Use bubble wands in different shapes like squares, triangles, and stars, or bend pipe cleaners into your own shapes. What shape do you think the bubble will be?

Here's a hint: no matter the shape of the wand, bubbles always find their way to a perfect sphere. Can you figure out why?

Bubble Painting:

Mix food coloring into your solution and blow through a straw until bubbles overflow onto paper. What patterns do you think the bubbles will leave behind? Take a close look at the prints and see what you notice about the shapes and colors.

Bubble within a bubble:

Dip your straw in the bubble solution, then carefully insert it into a bubble and blow gently to create a smaller bubble inside. What do you think will happen when two bubbles touch? You might be surprised by what you find.

The longest lasting bubble:

Try mixing your bubble solution in different ways by using more glycerin, less soap, or cold or warm water and time each bubble before it pops. Which do you think will last the longest? Keep track of your results and see if your prediction was right.

Bubble Exploration by Age Group

Ages 1–3:

Explore the bubbles together through blowing and popping!

Ages 4–7:

Focus on making predictions and sharing observations afterward.

Ages 8–11:

Record results, test variables, and draw conclusions.

